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#### HE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Judith Kelleher-Andersson et al.

Appl. No.:

10/728,652

Conf. No.:

8455

Filed:

December 5, 2003

Title:

METHOD OF DISCOVERING NEUROGENIC AGENTS

Art Unit:

1614

Examiner:

Shirley V. Gembeh

Docket No.:

109015-032

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

#### INFORMATION DISCLOSURE STATEMENT TRANSMITTAL LETTER

Sir:

Submitted herewith is an Information Disclosure Statement for consideration in the above-identified application. In accordance with the provisions of 37 C.F.R. 1.56, 37 C.F.R. 1.97, and 37 C.F.R. 1.98, Applicants request that a citation and examination of the references cited on the enclosed PTO-1449 form be made during the course of examination of the above-identified application for United States patent. Pursuant to 37 C.F.R. 1.98, copies of any cited foreign patent documents and non-patent documents are enclosed.

### This Information Disclosure Statement is submitted:

- [] Within three months of filing of a national application; within three months of the date of entry of the national stage as set forth in 37 C.F.R. §1.491 in an international application; before the mailing date of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a Request for Continued Examination.
- [X] After the period specified above, but before the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application and is accompanied by one of:
  - [X] Payment of the fee set forth in 37 CFR 1.17(p); or
  - [ ] The certification specified in 37 CFR 1.97(e) follows.
- [] After the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application and is accompanied by the fee set forth in 37 CFR 1.17(p) and the certification specified in 37 CFR 1.97(e) follows.

12/18/2006 NNGUYEN1 00000003 021818 10728652 01 FC:1806 180.00 DA

- [] The undersigned counsel for applicant(s) hereby certifies each item of information contained in the accompanying Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the Information Disclosure Statement.
- [] The undersigned counsel for applicant(s) hereby certifies that no item of information contained in the accompanying Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, after making reasonable inquiry, no item of information contained in the accompanying Information Disclosure Statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the Information Disclosure Statement.
- [X] A copy of a Search Report from a corresponding foreign patent application is enclosed.
- A check in the amount of \$180 to cover the required fee is enclosed.
- [X] The Commissioner is hereby authorized to charge the amount of \$180 to cover the required fee to Deposit Account No. 02-1818.
- [X] The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 02-1818.

Respectfully submitted,

BELL, BOYD & LLOYD LLC

Bradley E. Davis Reg. No. 56,727

Customer No. 24573

Dated: December 13, 2006

# IN AN APPLICATION (See several sheets if necessary)

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Filing Date	Group
December 5, 2003	1614

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Examiner's		U.S. PATEN	T DOCUMENTS			
Examiner's Initials	Document Number	Publication Date	Inventor	Class	Subclass	Filing Date If Appropriate
	5,166,065	November 24, 1992	Williams et al.			
	5,580,777	December 3, 1996	Bernard et al.			
	5,750,376	May 12, 1998	Weiss et al.			
	6,040,180	March 21, 2000	Johe			
	6,531,464	March 11, 2003	Szabo et al.			
	7,101,709	September 5, 2006	Weiss et al.			

FOREIGN PATENT DOCUMENTS							
Examiner's	Document	Publication				Translation	
Initials	Number	Date	Country	Class	Subclass	Yes	No
	WO 89/03872	May 5, 1989	PCT				
	WO 91/02003	February 21, 1991	PCT		,		
	WO 91/09936	July 11, 1991	PCT				
	WO 93/01275	January 21, 1993	PCT				

Examiner's Initials	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
	Almazan, G. et al, "Triiodothyronine Stimulation of Oligodendroglial Differentiation and Myelination," Dev. Neurosci, Vol. 7, pages 45-54, 1985.
	Anchan, R.M et al, "EFG and TGF-α Stimulate Retinal Neuroepithelial Cell Proliferation In Vitro," NEURON, Vol. 6, pages 923-936, 1991.
	Arsenijevic Y. et al, "Isolation of multipotent neural precursors residing in the cortex of the adult human brain," EXPERIMENTAL NEUROLOGY, Vol 170, pages 48-62, 2001.
	Avellana-Adalid, V. et al., "Expansion of Rat Oligodendrocyte Progenitors into Proliferative "Oligospheres" that Retain Differentiation Potential," JOURNAL OF NEUROSCIENCE RESEARCH, Vol. 45, pages 558-570, 1996, http://www3.interscience.wiley.com/cgi-bin/abstract/67559/ABSTRACT.
	Barlett, P.F. et al., "Immortalization of mouse neural precursor cells by the c-myc oncogene," NEUROBIOLOGY, Vol. 85, pages 3255-3259, 1998.
	Behl C., "Apoptosis and Alzheimer's disease," JOURNAL OF NEURAL TRANSMISSION, Vol. 107, pages 1325-1344, 2000.
	Bernard, O. et al., "Role of the c-myc and the N-myc Proto-Oncogenes in the Immortalization of Neural Precursors," JOURNAL OF NEUROSCIENCE RESEARCH, Vol. 24, pages 9-20, 1989.
	Birren, S.J. et al., "A v-myc-Immortalized Sympathoadrenal Progenitor Cell Line in Which Neuronal Differentiation Is Initiated by FGF but Not NGF," NEURON, Vol. 4, pages 189-201, 1990.

Examiner:	
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<sup>\*</sup>Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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	Bredesen, D.E. et al., "Neural Transplantation Using Temperature-sensitive Immortalized Neural Cells: A Preliminary Report," Annals of Neurology, Vol. 27, pages 205-207, 1990.
	Bremner, J. D. et al., "Hippocampal volume reduction in major depression," Am. J. PSYCHIATRY, Vol 157, pages 115-117, 2000.
	Brezun, J. et al., "Depletion in serotonin decreases neurogenesis in the dentate gyrus and the subventricular zone of adult rats," NEUROSCIENCE, Vol 89, pages 999-1002, 1999.
	Broe, M. et al., "Relationship between DNA fragmentation, morphological changes and neuronal loss in Alzheimer's disease and dementia with Lewy bodies," ACTA NEUROPATHOL, Vol. 101, pages 616-624, 2001.
	Calof A L. et al., "Analysis of neurogenesis in a mammalian neuroepithelium: proliferation and differentiation of an olfactory neuron precursor in vitro," NEURON, Vol. 3, pages 115-127, 1999.
	Cambray-Deakin, M.A. The expression of excitatory amino acid binding sites during neuritogenesis in the developing rat cerebellum. Ref. No. 78577. BIOL ABSTR Vol, 90, 1990.
	Cameron H A. et al., "Regulation of neurogenesis by growth factors and neurotransmitters," JOURNAL OF NEUROBIOLOGY, Vol 36, pages 287-306, 1998.
	Cattaneo, E. et al., "Proliferation and differentiation of neuronal stem cells regulated by nerve growth factor," Letters To Nature, Vol. 347, pages 762-765, 1990.
	Cepko, C.L., "Immortalization of Neural Cells Via Retrovirus-Mediated Oncogene Transduction," Annu. Rev. Neurosci., Vol. 12, pages 47-65, 1989.
	Chabot, P. Transient expression of an intermediate filament-associated protein (IFAPa-400) during in vivo and in vitro differentiation of chick embryonic cells derived form neuroectoderm. Ref. No. 78577. BIOL ABSTR Vol, 90, 1990.
	Coon H G. et al., "Cell cultures of neuroblasts from rat olfactory epithelium that show odorant responses," NEUROBIOLOGY, Vol 86, pages 1703-1707, 1989.
	Coppell, A. L. et al., "Bi-phasic change in BDNF gene expression following antidepressant drug treatment," NEUROPHARMCAOLOGY, Vol 44, pages 903-910, 2003.
	Czeh, B. et al., "Stress-induced changes in cerebral metabolites, hippocampal volume, and cell proliferation are prevented by antidepressant treatment with tianepine," PNAS, Vol. 98, pages 12796-12801, 2001.
	DiCicco-Bloom, E. et al., "Neuroblast Mitosis in Dissociated Culture: Regulation and Relationship to Differentiation," THE JOURNAL OF CELL BIOLOGY, Vol. 110, pages 2073-2086, 1990.

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s System Precursors OGY, Vol. 88, pages
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es 183-194, 2002.
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(Use several sheets if necessary)

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	Goldman S A. et al., "In vitro neurogenesis by neuronal precursor cells derived from the adult songbird brain," THE JOURNAL OF NEUROSCIENCE, Vol. 12, pages 2532-2541, 1992.
	Gould E. et al., "Inaugural Article: Adult-generated hippocampal and neocortical neurons in macaques have a transient existence," PNAS, Vol 98, pages 10910-10917, 2001.
	Gu W. et al., "Cortical neurogenesis in adult rats after reversible photothrombotic stroke," JOURNAL OF CEREBRAL BLOOD FLOW AND METABOLISM, Vol. 20, pages 1166-1173, 2000.
	Hata, M. et al., "A decrease in the wet-dog shakes response to the second administration of kainic acid in juvenile rats," Ref. No. 31832, BIOL ABSTR Vol, 92, 1991.
	Hauser K F. et al., "Opioids intrinsically inhibit the genesis of mouse cerebellar granule neuron precursors in vitro: differential impact of mu and delta receptor activation on proliferation and neurite elongation," EUROPEAN JOURNAL OF NEUROSCIENCE, Vol. 12, pages 1291-1293, 2000.
	Honegger, P. et al., "Growth and Differentiation of Aggregating Fetal Brain Cells in a Serum-Free Defined Medium," NATURE, Vol. 282, pages 305-308, 1979.
	Horcholle-Bossavit, G. et al., "Postnatal development of peroneal motoneurons in the kitten," Ref. No. 78577. BIOL ABSTR Vol, 90, 1990.
	Hunter, S.F. et al., "Growth factor responses of enriched bipotential glial progenitors," Ref. No. 78577, BIOL ABSTR Vol, 90, 1990.
	Jelitai M. et al., "Regulated appearance of NMDA Receptor Subunits and Channel Functions Duriing In Vitro Neuronal Differentiation," JOURNAL OF NEUROBIOLOGY, Vol. 51, pages 54-65, 2002.
	Jin K. et al., "Stem cell factor stimulates neurogenesis in vitro and in vivo." The Journal of Clinical Investigation, Vol. 110, pages 311-319, 2002.
	Jin K. et al., "Vascular endothelial growth factor (VEGF) stimulates neurogenesis in vitro and in vivo," PNAS, Vol 99, pages 11946-11950, 2002.
	Jones-Villeneuve, et al., "Retinoic Acid Induces Embryonal Carcinoma Cells to Differentiate into Neurons and Glial Cells," The Journal of Cell Biology, Vol. 94, pages 253-262, 1982.
	Kehl L J. et al., "Neurogenesis in postnatal rat spinal cord: a study in primary culture," SCIENCE, Vol 276, pages 586-589, 1997
	Kempermann, G. et al., "Depressed new neurons-adult hippocampal neurogenesis and a cellular plasticity hypothesis of major depression," BIOLOGICAL PSYCHIATRY, Vol. 54, pages 499-503, 2003.
	Kempermann, G. et al., "Genetic determinants of adult hippocampal neurogenesis correlate with acquisition, but not probe trial performance, in the water maze task," EUROPEAN JOURNAL OF NEUROSCIENCE, Vol. 16, pages 129-136, 2002.

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	Kershaw, T.R. et al., "Foetal H-2Kb-tsA58 Transgenic Mouse Tissue Develops in a Similar Manner to ISO Geneic Foetal Tissue when Transplanted into Adult Mouse Brain," DUKE MED CENT LIB 34.P4, p. 208, 1991.
	Kitani, H. et al., "Isolation and Characterization of Mouse Neural Precursor Cells in Primary Culture," IN VITRO CELL. DEV. BIOL., Vol. 27A, pages 615-624, 1991.
	Kuhn, H. G. et al., "Neurogenesis in the dentate gyrus of the adult rat: age-related decrease of neuronal progeneitor proliferation," THE JOURNAL OF NEUROSCIENCE, Vol 16, pages 2027-2033, 1996.
	Lee, A. L. et al., "Stress and depression: possible links to neurons death in the hippocampus," BIPOLAR DISORDERS, Vol 4, pages 117-128, 2002.
	Lee, J. et al., "Dietary restriction increases the number of newly generated neural cells, and induces BDNF expression, in the dentate gyrus of rats," JOURNAL OF MOLECULAR NEUROSCIENCE, Vol. 15, pages 99-108, 2001.
	Lichtenwalner, R. J. et al., "Intracerebroventricular infusion of insulin-like growth factor-1 ameliorates the age-related decline in hippocampal neurogenesis," NEUROSCIENCE, Vol. 107, pages 603-613, 2001.
	Lovejoy, D.A. et al., "Primary structure of two forms of gonadotropin-releasing hormone from brains of the American alligator," Ref. No. 31832, BIOL ABSTR Vol, 92, 1991.
	Lucassen, P. J. et al., "Hippocampal apoptosis in major depression is a minor event and absent from subareas at risk for glucocorticoid overexposure," AMERICAN JOURNAL OF PATHOLOGY, Vol 158, pages 453-468, 2001.
	Lyman, W.D. et al., "Human Fetal Central Nervous System Organotypic Cultures," DEVELOPMENTAL BRAIN RESEARCH, Vol. 60, pages 155-160, 1991.
	Ma W. et al., "Acetylcholine stimulates cortical precursor cell proliferation in vitro via muscarinic receptor activation and MAP kinase phosphorylation," EUROPEAN JOURNAL OF NEUROSCIENCE, Vol. 12, pages 1227-1240, 2000.
	Madsen T M. et al., "Increased neurogenesis in a model of electroconvulsive therapy," BIOLOGICAL PSYCHIATRY, Vol. 47, pages 1043-1049, 2000.
	Malberg, J. E. et al., "Chronic antidepressant treatment increases neurogenesis in adult rat hippocampus," THE JOURNAL OF NEUROSCIENCE, Vol. 20, pages 9104-9110, 2000.
	Marin N. et al., $\beta$ amyloid-induced activation of caspase-3 in primary cultures of rat neurons," MECHANISMS OF AGEING AND DEVELOPMENT, Vol. 119, pages 63-67, 2000.
	Masters, B.A. "Insulin-like growth factor I (IFG-I) receptors and IGF-I action in oligodendrocytes from rat brains." Ref. No. 31832, BIOL ABSTR Vol, 92, 1991.
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	Mauerhoff, T. et al., 'Differential Expression and Regulation of Major Histocompatibility Complex (MHC) Products in Neural and Glial Cells of the Human Fetal Brain," JOURNAL OF NEUROIMMUNOLOGY, Vol. 18, pages 271-289, 1988.
	Mayo W. et al., "Pregnenolone sulfate and aging of cognitive functions: behavioral, neurochemical, and morphological investigations," HORMONES AND BEHAVIOR, Vol. 40, pages 215-217, 2001.
	McCarthy, M. et al., "Infection of Human Neural Cell Aggregate Cultures with a Clinical Isolate of Cytomegalovirus," JOURNAL OF NEUROPATHOLOGY AND EXPERIMENTAL NEUROLOGY, Vol. 50, pages 441-450, 1991.
	McKay, R. et al., "Mechanisms Regulating Cell number and Type in the Mammalian Central Nervous System," COLD SPRING HARBOR SYMPOSIA ON QUANTITATIVE BIOLOGY, Vol. LV, pages 291-301, 1990.
	Mervaala, E. et al., "Quantitative MRI of the hippocampus and amygdala in severe depression," PSYCHOLOGICAL MEDICINE, Vol. 30, pages 117-125, 2000.
	Morrison, R.S. et al., "Trophic Stimulation of Cultured Neurons from Neonatal Rat Brain by Epidermal Growth Factor," Science, Vol. 238, pages 72-75, 1987.
	Murphy, M. et al., "Fibroblast Growth Factor Stimulates the Proliferation and Differentiation of Neural Precursor Cells In Vitro," JOURNAL OF NEUROSCIENCE RESEARCH, Vol. 25, pages 463-475, 1990.
	Murrell W. et al., "Neurogenesis in adult human," NEUROREPORT, Vol. 7, pages 1189-1194, 1996.
	Mytilineou, C. et al., "Epidermal Growth Factor-Induced Survival and Proliferation of Neuronal Precursor Cells from Embryonic Rat Mesencephalon," Neuroscience Letters, Vol. 135, pages 62-66, 1992.
	Nakagawa, S. et al., "Regulation of neurogenesis in adult mouse hippocampus by cAMP and the cAMP reponse element-binding protein," THE JOURNAL OF NEUROSCIENCE, Vol. 22, pages 3673-3682, 2002.
	Nestler, E. J. et al., "Neurobiology of Depression," NEURON, Vol. 34, pages 13-25, 2002.
	Nibuya,, M. et al., "Chronic antidepressant administration increases the expression of cAMP response element binding protein (CREB) in rat hippocampus." THE JOURNAL OF NEUROSCIENCE, Vol. 16, pages 2365-2372, 1996.
	Nielsen, F.C. et al., "Receptor Binding, Endocytosis, and Mitogenesis of Insulin-Like Growth Factors I and II in Fetal Rat Brain Neurons," JOURNAL OF NEUROCHEMISTRY, Vol. 56, pages 12-21, 1991.
	Palmer T D. et al., "Fibroblast growth factor-2 activates a latent neurogenic program in neural stem cells from diverse regions of the adult CNS," THE JOURNAL OF NEUROSCIENCE, Vol. 19, pages 8487-8497, 1999.
	Peterson D. A. et al., "Trophic factor therapy for neuronal death," ALZHEIMER DISEASE, 2 <sup>nd</sup> Edition, Chapter 25, pages 373-388, 1999.

Examiner:	Date Considered:
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Initials	Pham, K. et al., "Repeated restraint stress suppresses neurogenesis and induces biphasic PSA-NCAM expression in the adult dentate gyrus," EUROPEAN JOURNAL OF NEUROSCIENCE, Vol. 17, pages 879-886, 2003.
	Piescinski, P. et al., "Neurogenesis of the amygdaloid complex in the rhesus monkey," Society for Neuroscience Abstracts, Vol. 16, page 1147, 1990.
	Pincus D W. et al., "In vitro neurogenesis by adult human epileptic temporal neocortex," CLINICAL NEUROSURGERY, Chapter 2, pages 17-25.
	Pucilowski, O. et al., 'Decreased hyperthermic effect of MK801 in selectively bred hypercholinergic rats," Ref. No. 31832, BIOL ABSTR Vol, 92, 1991.
	Puliam, L. et al., "A Normal Human Brain Cell Aggregate Model for Neurobiological Studies," JOURNAL OF NEUROSCIENCE RESEARCH, Vol. 21, pages 521-230, 1988.
	Qu, T. et al., "Human neural stem cells improve cognitive function of aged brain," NEUROREPORT, Vol. 12, pages 1127-1132, 2001.
	Raina, A K. et al., "Abortive apoptosis in Alzheimer's disease," ACTA NEUROPATHOL, Vol. 101, pages 305-310, 2001.
	Rathbone M P. et al., "Trophic effects of purines in neurons and glial cells," PROGRESS IN NEUROBIOLOGY, Vol. 59, pages 663-690, 1999.
	Rettig, W.J. et al., "Cell Type-specific Control of Human Neuronectin Secretion by Polypeptide mediators and Phorbol Ester," The Journal of Histochemistry and Cytochemistry, Vol. 37, pages 1777-1786, 1989.
	Rettig, W.J. et al., "Stimulation of Human Neuronectin Secretion by Brain-Derived Growth Factors," Brain Research, Vol. 487, pages 171-177, 1989.
	Reynolds, B.A. et al., "A Multipotent EFG-Responsive Striatal Embryonic Progenitor Cell Produces Neuron and Astrocytes," The JOURNAL OF NEUROSCIENCE, Vol. 12, pages 4565-4574, 1992.
	Reynolds, B.A. et al., "A Non-Transformed, Growth Factor Dependent Stem Cell Line Derived From the Embryonic Mouse CNS Produces Neurons, Astrocytes and Oligodendrocytes," DUKE MED CENT LIB 34.P3, p. 208, 1991.
	Reynolds, B.A. et al., "EGF- and TFG\(\alpha\)-responsive striatal embryonic progenitor cells produce both neurons and astocytes," SOCIETY FOR NEUROSCIENCE ABSTRACTS, Vol. 16, page 1147, 1990.
	Reynolds, B.A. et al., "Generation of Neurons and Astocytes from Isolated Cells of the Adult Mammalian Central Nervous System," Science, Vol. 255, pages 1707-1709, 1992.
	Romand, R. et al., "Development of tonotopy oin the inferior colliculus: 1. Electrophysiological mapping in house mice," Ref. No. 78577. BIOL ABSTR Vol, 90, 1990.

	Examiner:	Date Considered:
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	Roth, K. A., "Caspases, apoptosis, and Alzheimer disease: causation, correlation, and confusion," JOURNAL OF NEUROPATHOLOGY AND EXPERIMENTAL NEUROLOGY, Vol. 60, pages 829-838, 2001.
	Roy N S, et al., "In vitro neurogenesis by progenitor cells isolated from the adult human hippocampus," NATURE MEDICINE, Vol. 6, pages 271-277, 2000.
	Rozental R. et al., "Differentiation of hippocampal progenitor cells in vitro: temporal expression of intercellular coupling and voltage- and ligand-gated responses," Developmental Biology, Vol. 167, pages 350-362, 1995.
	Rutka, J.T. et al., "Characterization of Fetal Human Brain Cultures," Dev. Neurosci., Vol. 9, pages 154-173, 1987.
	Sales, N. et al., "Neutral endopeptidase 24.11 in rat peripheral tissues: comparative localization bby "ex vivo" and "in vitroautoradiography," Ref. No. 31832, BIOL ABSTR Vol, 92, 1991.
	Saneto, R.P. et al., "Insulin/Insulin-Like Growth Factor I and Other Epigenetic Modulators of Myelin Basic Protein Expression in Isolated Oligodendrocyte Progenitor Cells," JOURNAL OF NEUROSCIENCE RESEARCH, Vo. 21, pages 210-219, 1988.
	Santarelli, L. et al., "Requirement of hippocampal neurogenesis for the behavioral effects of antidepressants," SCIENCE, Vol. 301, pages 805-809, 2003.
	Sapolsky, R. M., "The possibility of neurotoxicity in the hippocampus in major depression: a primer on neuron death.," BIOLOGICAL PSYCHIATRY, Vol. 48, pages 755-765, 2000.
	Sato, H. et al., "Somatostatin receptors in the senescent rat brain: A quantitative autoradiographic study," Ref. No. 31832, BIOL ABSTR Vol, 92, 1991.
	Satoh M. et al., "Promotion of neurogenesis in mouse olfactory neuronal progenitor cells by leukemia inhibitory factor in vitro," NEUROSCIENCE LETTERS, Vol. 225, pages 165-168, 1997.
	Scott B W. et al., "Neurogenesis in the dentate gyrus of the rat following electroconvulsive shock seizures," EXPERIMENTAL NEUROLOGY, Vol. 165, pages 231-236, 2000.
	Seaberg R M. et al., "Adult rodent neurogenic regions: the ventricular subependyma contains neural stem cells, but the dentate gyrus contains restricted progenitors," THE JOURNAL OF NEUROSCIENCE, Vol. 22, pages 1784-1793, 2002.
	Seigel, G.M. et al., "Differentiation of oncogenically altered chick neuroretinal cells by succinylated concanavalin A," Society for Neuroscience Abstracts, Vol. 16, page 1147, 1990.
	Sheline, Y. I. et al., "Hippocampal atrophy in recurrent major depression," PROC. NATL. ACAD. SCI. USA, Vol 93, pages 3908-3913, 1996.

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	Shirayama, Y. et al., "Brain-derived neurotrophic factor produces antidepressant effects in behavioral models of depression," THE JOURNAL OF NEUROSCIENCE, Vol. 22, pages 3251-3261, 2002.
	Shors T J. et al., "Neurogenesis in the adult is involved in the formation of trace memories," NATURE, Vol 410, pages 372-376, 2001.
	Shou J. et al., "BMPs inhibit neurogenesis by a mechanism involving degradation of a transcription factor," NATURE NEUROSCIENCE, Vol. 2, pages 339-345, 1999.
	Silani, V. et al., "Human Neuronal Cells In Culture: From Concepts to Basic Methodology," BOLL. 1ST. SIEROTER. MILA., Vol. 69, pages 309-313, 1990.
	Sorensen, K.A. et al., "Postembryonic neurogenesis in the Brain of <i>Manduca Sexta</i> ," Society for Neuroscience Abstracts, Vol. 16, page 1147, 1990.
	Sternfeld, M.D. et al., "Cultured Human Retinal Pigment Epithelial Cells Express Basic Fibroblast Growth Factor and its Receptor," Current Eye Research, Vol. 8, pages 1029-1037, 1989.
	Stewart, J.S. et al., "Olfactory bulb and sensory epithelium in goldfish: Morphological alterations accompanying growth," Ref. No. 78577. BIOL ABSTR Vol., 90, 1990.
	Takahashi J. et al., "Retinoic acid and neurotrophins collaborate to regulate neurogenesis in adult-derived neural stem cell cultures," J NEUROBIOL, Vol 38, pages 65-81, 1999.
	Takahashi, T. et al., "Cell cycle kinetics of the E14 murine cerebral ventricular zone: estimates based upon S-Phase labeling with BUdR," SOCIETY FOR NEUROSCIENCE ABSTRACTS, Vol. 16, page 1147, 1990.
	Taupin P, et al., "FGF-2-responsive neural stem cell proliferation requires CCg, a novel autocrine/paracrine cofactor," NEURON, Vol 28, pages 385-397, 2000.
	Taylor, M. et al., "Induction of Differentiation of Rat Retinal, Germinal, Neuroepithelial Cells by dbcAMP," JOURNAL OF NEUROBIOLOGY, Vol. 21, pages 470-481, 1990.
	Temple, S., "Division and Differentiation of Isolated CNS Blast Cells in Microculture," NATURE, Vol. 340, pages 471-473-1989.
	Tenot, M. et al., 'Epidermal Growth Factor Enhances the Expression of an Edogenous Lectin in Aggregating Fetal Brain Cell Cultures," JOURNAL OF NEUROCHEMISTRY, Vol. 53, pp. 1435-1441, 1989.
	Torelli, S. et al., "Human Fetal Brain Cultures: A Model to Study Neural Proliferation, Differentiation and Immunocompetence," ADV. EXP. MED. BIOL, Vol. 296, pages 121-134, 1991.

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Atty Docket No.
109015-032

Applicant Date Submitted
Kelleher-Andersson et al.

Filing Date December 5, 2003

Application No.
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Date Submitted
December 13, 2006

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Examiner's Initials	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
	Torres, R.A. et al., "Alteration of Neuronal Regulation of Astrocytoma Proliferation by Insertional Mutagenesis," Society for Neuroscience Abstracts, Vol. 16, page 1147, 1990.		
	Villa, A. et al., "Intracellular calcium ion stores in chicken purkinje neurons; Differential distribution of the low affinity-high capacity calcium binding protein, calsequestrin, of calcium ATPase and of the ER luminal protein," Bip. Ref. No. 31832, BIOL ABSTR Vol, 92, 1991.		
	Von Frijtag, J. C. et al., "Chronic imipramine treatment partially reverses the lnog-term changes of hipocampal synaptic plasticity in socially stressed rats," Neuroscience Letters, Vol 309, pages 153-156, 2001.		
	Vu, E.T. et al., "Evidence for a Computational Distinction Between Proximal and Distal Neuronal Inhibition," SCIENCE, Vol. 255, pages 1710-1712, 1992.		
	Wainer, B.H. et al., "In vitro cell cultures as model of the basal forebrain," ADV EXP MED BIOL., Vol. 295, pages 415-437, 1991.		
	Watanabe, R.T. et al., "Rod Photoreceptor development in vitro: intrinsic properties of proliferating neuroepithelial cells change as development proceeds in the rat retina," NEURALCULTURE, Abstract, 1990.		
	Wohl C A, et al., "Retinoic acid enhances neuronal proliferation and astroglial differentiation in cultures of CNS stem cell-derived precursors," J NEUROBIOL, Vol. 37, pages 281-290, 1998.		
	Xu, L. et al., "Glucocorticoid receptor and protein/RNA synthesis-dependent mechanisms underlie the control of synaptic plasticity by stress," PNAS, Vol 95, pages 3204-3208, 1998.		
	Yoshimoto, Y. et al, "The Effect of Cool Storage on the Survivability of Intraventricular Rat Fetal Ventral Mesencephalic Graft," DUKE MED CENT LIB 34.P1, p. 208, 1991.		
	Zhang, R. et al, "A nitric oxide donor induces neurogenesis and reduces functional deficits after stroke in rats," ANN. NEUROL., Vol. 50, pages 602-611, 2001.		

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Applicant(s): Kelleher-Anderson et al.

Appl. No.:

10/728,652

Conf. No.:

8455

Filed:

December 5, 2003

Title:

METHOD FOR DISCOVERING NEUROGENIC AGENTS

Art Unit:

1614

Examiner:

Shirley V. Gembeh

Docket No.: 109015-032

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